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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,319	06/27/2003	Philip D. Nguyen	2003-IP-010077UI	8000
7590	07/22/2005		EXAMINER	
Robert A. Kent Halliburton Energy Services 2600 South 2nd Street Duncan, OK 73536			SUCHFIELD, GEORGE A	
			ART UNIT	PAPER NUMBER
			3676	

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/608,319	NGUYEN, PHILIP D.	
	<b>Examiner</b>	<b>Art Unit</b>	
	George Suchfield	3676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1)  Responsive to communication(s) filed on 27 June 2005.  
2a)  This action is FINAL.                    2b)  This action is non-final.  
3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

- 4)  Claim(s) 1-56 is/are pending in the application.  
    4a) Of the above claim(s) 48-56 is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 1-17, 19, 20, 22, 24-40, 42, 43 and 45 is/are rejected.  
7)  Claim(s) 18, 21, 23, 41, 44 and 46 is/are objected to.  
8)  Claim(s) 1-56 are subject to restriction and/or election requirement.

## Application Papers

- 9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892) 6/13/03; 4)  Interview Summary (PTO-413)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948) 5/10/04; Paper No(s)/Mail Date. \_\_\_\_.  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) 5/10/04; 5)  Notice of Informal Patent Application (PTO-152)  
Paper No(s)/Mail Date 3/25/05; 6/10/05; 2/13/04; 12/20/04; 6/16/04; 6)  Other: \_\_\_\_.

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1. Claim 47 is generic to a plurality of disclosed patentably distinct species comprising a screen and a perforated shroud. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

In view of applicant's previous restriction/election response dated June 27, 2005, wherein the screen species was elected, the perforated shroud species of the Markush claim 47 has been withdrawn from consideration.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 4, 5, 9, 16, 27, 28, 39 and 42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4, 5, 9, 16, 17, 19, 27, 28, 39 and 42 are deemed indefinite in being drawn to improper Markush groupings. As noted in MPEP Section 2173.05(h), the use of the term "comprising" or "comprises" is improper in setting forth the Markush grouping. Accordingly, in line 1 or 2 of each of these claims, the transitional phrase "comprises" must be changed to, -- is selected from the group consisting of -- or -- is -- .

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Claim 17 recites the limitation "the degradable polymer" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 19 recites the limitation "the dehydrated salt" in line 1. There is insufficient antecedent basis for this limitation in the claim.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-10, 15, 16, 20, 22, 24-33, 38, 39, 43, 45 and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Nguyen et al (6,390,195).

Nguyen et al discloses a method of controlling the production of particulates from a well by emplacement of a permeable cement within the well bore penetrating a subterranean formation. The permeable cementing slurry is positioned in the annulus between a perforated pipe and the open wellbore. In one embodiment, Nguyen et al (note col. 5, lines 52-61) may employ a screen. Nguyen et al further provides the cement with a particulate cross-linked gel containing an internal breaker which causes the gel to break "whereby vugs and channels are formed in the set cement column" (col. 2, lines 42-51; col. 3, lines 33). Insofar as one of the breakers may comprise the enzyme hemicellulase, it is deemed that the particulate cross-linked gel inherently comprises "a degradable material capable of undergoing an irreversible

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degradation downhole”, as called for in claims 1 and 24, by virtue of the enzyme attack or cleavage of the hydratable polymer component, such as hydroxyalkylcellulose, of the particulate cross-linked gel.

As per claims 2 and 25, it is noted that Nguyen et al (col. 4, lines 13-18) further includes a surfactant which functions, in part, to wet the cement during mixing. Hence, the said surfactant is deemed to comprise a “dispersant” as recited. The recited range in claims 3 and 26 of such dispersant appears encompassed by the corresponding range in Nguyen et al of “0.1% to about 5%” (col. 4, lines 59-63).

As per claims 4, 5, 27 and 28, Nguyen et al clearly discloses the use of Portland cement, which, by definition, includes calcium. Also, the cementing slurry of Nguyen et al may comprise a foam, i.e., a “low-density” cement.

The recited range(s) of hydraulic cement in the permeable cement composition of claims 6, 7, 29 and 30 appears encompassed by the corresponding cement concentration range in Nguyen et al (col. 4, lines 59-63) of 30 – 70 % by weight. Similarly, the recited amount and/or type of water set forth in claims 8-10 and 31-33 appears to correspond to that employed in Nguyen et al.

As per claims 15, 16, 38 and 39 as noted above, the particulate cross-linked gel comprises a degradable polymer, which is degraded or decomposed by the enzyme breaker. Such hydratable, degradable polymer of hydroxyalkylcellulose clearly comprises a polysaccharide.

As per claims 20 and 43, the recited range(s) of degradable material in the permeable cement composition appears encompassed by the corresponding particulate cross-linked gel concentration range in Nguyen et al (col. 3, lines 34-39) of 10 – 30 % by weight.

As per claims 22 and 45, Nguyen et al (col. 2, lines 29-57) clearly discloses that the set permeable cement will comprise "channels" defining the permeable paths or regions.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 11-14, 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al (6,390,195) as applied to claims 1 and 24 above, and further in view of Metcalf et al (4,210,455).

Metcalf et al (note col. 1, lines 36-59) discloses the use of a fluid loss agent in well cementing slurries. Accordingly, it would have been obvious to one of ordinary skill in the art to which the invention pertains, to similarly employ a fluid loss agent in the permeable well cementing slurry used in the well cementing method of Nguyen et al, as taught by Metcalf et al, in order to minimize or prevent loss of water from the cementing slurry during the circulation and setting of the permeable cement in Nguyen et al, as called for in claims 11 and 34. The particular amount of fluid loss agent utilized in the slurry, as recited in claims 12 and 35, would have been an obvious matter of design choice in carrying out the modified well cementing process of Nguyen et al based on, e.g., the particular well bore environment encountered and/or routine experimentation for process optimization.

Metcalf et al (col. 2, lines 22-33) further discloses that their cement composition is mixed "on-the-fly".

Accordingly, it would have been obvious to one of ordinary skill in the art to which the invention pertains, to similarly formulate the permeable well cementing slurry utilized in the well cementing method of Nguyen et al on-the-fly, as taught by Metcalf et al, as comprising a desirable method of mixing a cement slurry, depending on the well location or logistics, as called for in claims 13 and 36. It is further deemed that in formulating the permeable well cementing slurry on-the-fly in the method of Nguyen et al, as modified by Metcalf et al, the cementing slurry would thus be "transported" to some extent from the point of initial mixing to final emplacement in the well bore, as called for in claims 14 and 37.

8. Claims 17 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al (6,390,195) as applied to claims 1 and 24 above, and further in view of Vollmer (2,288,5557).

Vollmer (note page 2, col. 2, lines 1-18) discloses a process for cementing a well with a permeable cementing slurry which further comprises a plasticizer.

Accordingly, it would have been obvious to one of ordinary skill in the art to which the invention pertains, to similarly admix a plasticizer with the permeable well cementing slurry comprising a degradable polymer circulated in the well bore cementing process of Nguyen et al, as taught by Vollmer, in order to improve the workability or pumpability of the cementing slurry.

9. The prior art made of record and not-relied upon is considered pertinent to applicant's disclosure.

Other references cited disclose methods of well cementing, including the use of a permeable cement(s).

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10. Claims 19 and 42 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

11. Claims 18, 21, 23, 41, 44 and 46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Suchfield whose telephone number is 571-272-7036. The examiner can normally be reached on M-F (6:30 - 3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Glessner can be reached on 571-272-6843. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*George Suchfield*  
George Suchfield  
Primary Examiner  
Art Unit 3676

Gs  
July 19, 2005